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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/817,620	04/01/2004	Carl Woods	LAM2P474	2464
25920 7590 08/31/2007 MARTINE PENILLA & GENCARELLA, LLP 710 LAKEWAY DRIVE SUITE 200 SUNNYVALE, CA 94085			EXAMINER WATSON, JOY L	
			ART UNIT 1762	PAPER NUMBER
			MAIL DATE 08/31/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/817,620	Applicant(s) WOODS, CARL	
	Examiner Joy Watson	Art Unit 1709	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 16-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I (Claims 1-15), filed July 9, 2007 is acknowledged. Claims 16-20 have been withdrawn from further consideration.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-8 and 11-15 rejected under 35 U.S.C. 102(b) as being anticipated by Taniyama et al. (US Patent 6,247,479 known hereafter as '479).

Claim 1

'479 teaches an apparatus for processing a substrate with a fluid meniscus to be applied to a surface of the substrate (abstract), comprising: a docking surface (14) configured to be placed adjacent to an edge of the substrate (W), the docking surface (14) being about in the same plane as the substrate (W) (Fig. 13) (col. 6 lines 20-32, Fig. 2). "Providing a transition interface to allow the fluid meniscus to enter and exit the surface of the substrate" is intended use. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not

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differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

Claim 2

'479 teaches the apparatus according to Claim 1 and additionally teaches that the docking surface (14) defines a docking station (20) for the fluid meniscus (Fig. 13, col. 6 lines 20-32, col. 9 lines 23-32, col. 13 lines 1-10).

Claim 3

'479 teaches the apparatus according to Claim 2 and additionally teaches a coupon magazine (7b) for holding the docking station (20) that includes the docking surface (14) (Fig. 13, col. 6 lines 20-32).

Claim 4

'479 teaches the apparatus according to Claim 1, and additionally teaches that the docking surface (14) has a radial contour that matches a radial contour of the substrate (W) (col. 6, lines 20-32, Fig. 2) (See Fig. 3 below).



'479 teaches an apparatus for processing a substrate, comprising: a coupon magazine (7b) configured to hold a docking station for a proximity head (30), the coupon

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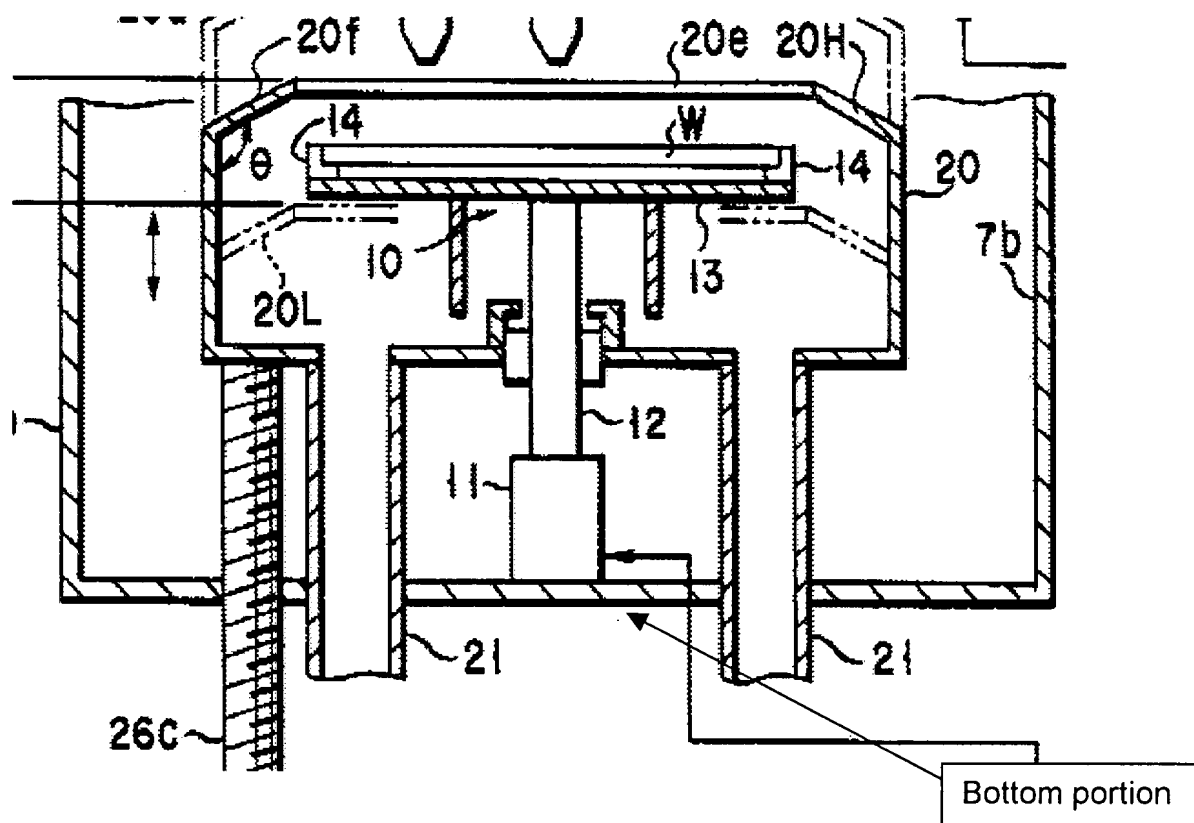
magazine (7b) being configured so the docking station (20) is held in place adjacent to an edge of the substrate (W) (col. 6, lines 20-32, Fig. 2).

Claim 6

'479 teaches the apparatus according to Claim 5 and additionally teaches the docking station (20) is defined by a docking surface (14) that provides a transition interface for a fluid meniscus of the proximity head (30) (col. 13 lines 1-10).

Claim 7

'479 teaches the apparatus according to Claim 6 and additionally teaches the coupon magazine (20) including a top portion and a bottom portion. (See Figure below).



Claim 8

'479 teaches the apparatus according to Claim 7 wherein the docking station (20) includes a top (20f and 20h) and bottom portion (See Figure below taken from Fig. 13 of Prior Art).

Claim 11

'479 teaches the apparatus according to Claim 5, and additionally teaches a coupon magazine mount (26c) configured to hold the coupon magazine (20) (col. 6 lines 20-32 Fig. 2).

Claim 12

'479 teaches the apparatus according to Claim 5 and additionally teaches a leveling mechanism (23) configured to move the docking station (20) to be substantially coplanar with the substrate (W) (col. 15 lines 35-42, Fig. 17). The leveling mechanism (23) is part of the docking station (20). "Configured to move the docking station to be substantially coplanar with the substrate" is intended use. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

Claim 13

'479 teaches the apparatus according to Claim 12 and additionally teaches where the leveling mechanism (23) is configured to move the docking station (20) in a vertical plane (col. 12 lines 21-30).

Claim 15

'479 teaches the apparatus according to Claim 5, wherein the coupon magazine includes a window (20e, Fig. 13, col. 12 lines 21-31).

4. Claim 14 rejected under 35 U.S.C. 103(a) as being unpatentable over '479 as applied to claim 14 above, and further in view of Brunk et al. (US Patent 5,305,502 known hereafter as '502).

Claim 14

'479 teaches the apparatus according to Claim 12, additionally it explicitly teaches a leveling mechanism (23) to vertically move the cup (20) (col. 12 lines 8-31). Although '479 does not explicitly teach that the leveling mechanism includes a screw mechanism to move a ball detent vertically it does implicitly teach that the screw mechanism (26c) is attached to the docking station (20). A person of ordinary skill in the art, upon reading the reference would also have recognized the desirability using a leveling mechanism. '502 teaches a leveling mechanism which includes a screw (16') configured to move a ball detent (424) which moves the chamber (80") in a vertical direction (col. 5 lines 24-62). Both references teach moving an object vertically. Thus, it would have been

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obvious to an person of ordinary skill in the art to try the leveling mechanism of '502 in an attempt to provide an improved mechanism for vertically moving the ball detent, as a person with ordinary skill has good reason to pursue the known options within his or her technical grasp. In turn because the apparatus includes a leveling mechanism in which the screw is configured to move a ball detent vertically is predicted by prior art, and the apparatus claimed would have been obvious to one of ordinary skill in the art.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claim 9-10 is rejected under 35 U.S.C. 103(a) as being unpatentable over '479 as applied to claim 5 above, and further in view of Oya et al. (US PG Pub 2002/0115024 A1 known hereafter as '024). (Raghavan et al. (US Patent 6,162,302 known hereafter as '302) is cited as evidence regarding claim 10.)

Claim 9

'479 teaches the apparatus according to Claim 5, but does not teach that the docking station (20) (part of a substrate washing apparatus) is a quartz material. '024 teaches that quartz is a known material for substrate washing apparatus (p. 1 paragraph 0014).

Rationale: The claim would have been obvious because the substitution of one known element for another would have yielded predictable results to one of ordinary skill in the art at the time of the invention. It would have been obvious to one of ordinary skill in the art at the time of the invention to substitute the material of the docking station of '479 with quartz as taught by '024, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Claim 10

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'479 teaches the apparatus according to Claim 5, and '024 teaches that the docking station can be made of quartz as discussed in Claim 9. Quartz is a hydrophilic material ('302 col. 5 lines 27-43).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent 5853961 (Sakai et al.) and US PG Pub 2004/0211447 A1 (Yokomizo) is cited for the movable wafer holder. US Patent 6,488,040 (De Larios et al.) is cited for the nozzle. US Patent 5,660,642 (Britten) is cited for the Maragoni flow process.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joy Watson whose telephone number is 571-270-1267. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Cleveland can be reached on 571-272-1418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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MICHAEL B. CLEVELAND
SUPERVISORY PATENT EXAMINER

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :Feb. 2007, July 2006, Mar. 2006, Dec. 2005, Oct. 2005, Feb. 2005, April 2004.